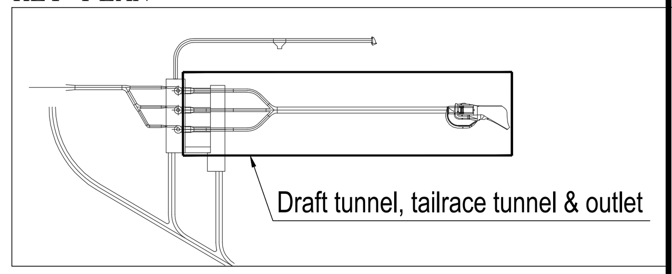
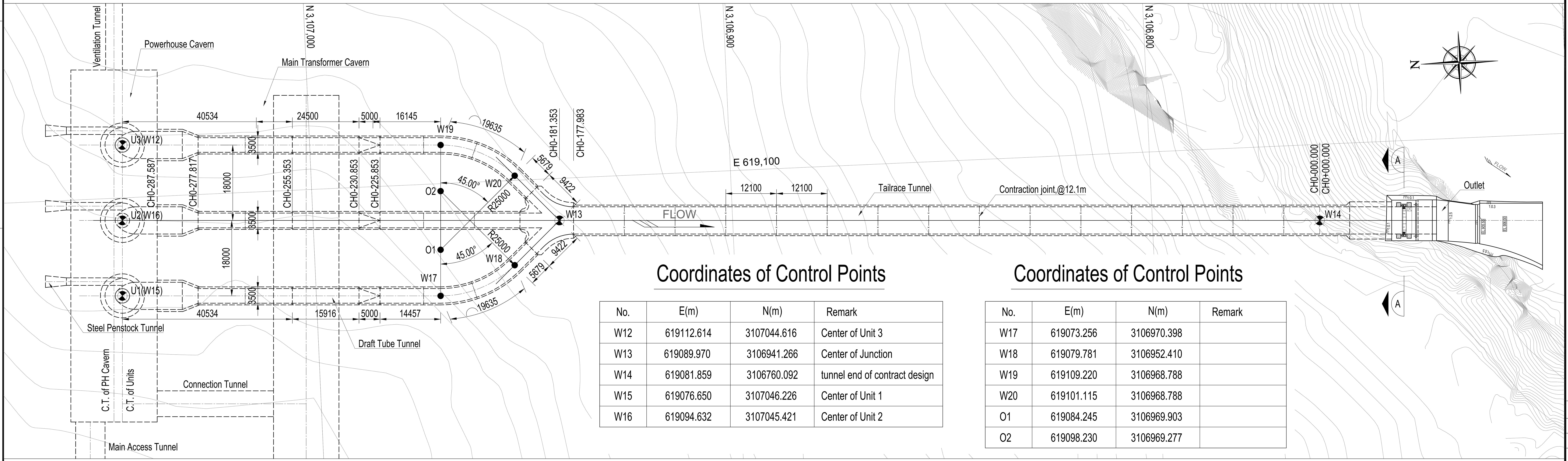
KEY PLAN



PLAN LAYOUT OF DRAFT TUBE TUNNEL , TAILRACE TUNNEL & OUTLET

Scale 1:500



Coordinates of Control Points

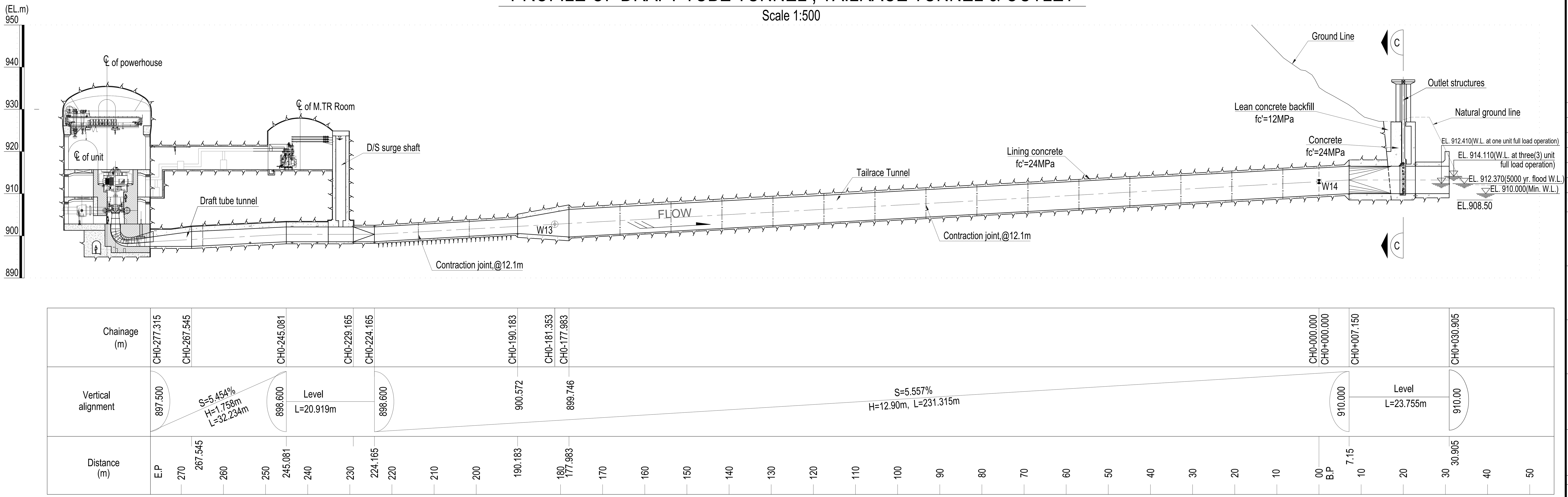
No.	E(m)	N(m)	Remark
W12	619112.614	3107044.616	Center of Unit 3
W13	619089.970	3106941.266	Center of Junction
W14	619081.859	3106760.092	tunnel end of contract design
W15	619076.650	3107046.226	Center of Unit 1
W16	619094.632	3107045.421	Center of Unit 2

Coordinates of Control Points

No.	E(m)	N(m)	Remark
W17	619073.256	3106970.398	
W18	619079.781	3106952.410	
W19	619109.220	3106968.788	
W20	619101.115	3106968.788	
O1	619084.245	3106969.903	
O2	619098.230	3106969.277	

PROFILE OF DRAFT TUBE TUNNEL , TAILRACE TUNNEL & OUTLET

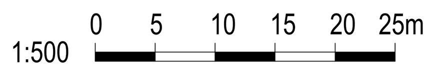
Scale 1:500



NOTE

1. This set of drawings are layout drawing of tailrace system.
2. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
3. Symbol description:
   - 3.1. A-line is the design excavation line.
   - 3.2. B-line is the overbreak line.
   - 3.3. R denotes round bar, yield strength of the round bar is 280mMpa.
   - 3.4. D denotes deformed bar, yield strength of the deformed bar is 500Mpa;
4. The specified compressive strength of concrete is the cylinder strength of 24MPa at age of 28 days.
5. Backfill grouting is applied to tunnel crown, consolidation grouting is applied to rock class IV and V.
6. Weep holes are proposed at locations where heavy leakage occurs after excavation.
7. Water levels are cited from Contract Documents.
8. The layout of draft tube tunnels and powerhouse & M.T. caverns are sketched and subjected to final design of E&M party.
9. See the subsequent drawings for the slope protection on the left and right sides of the tailrace outlet and the road to the tailrace platform.

Scale:



REFERENCE DRAWINGS

SYMBOL AND LEGEND

FOR APPROVAL

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REV. NO.	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.
0A	16.APR,2022	FIRST ISSUE	MA JIE	ZHANG J.Q.	ZHANG FAN LI W.G.

PROJECT TITLE

Upper Trishuli-1 HEP (216MW)

OWNER

NWEDC NEPAL WATER AND ENERGY DEVELOPMENT CO. PVT.LTD.

OWNER'S ENGINEER

TRACTEBEL engie
jade CONSULT

CONTRACTOR

DOOSAN Doosan Heavy Industries & Construction

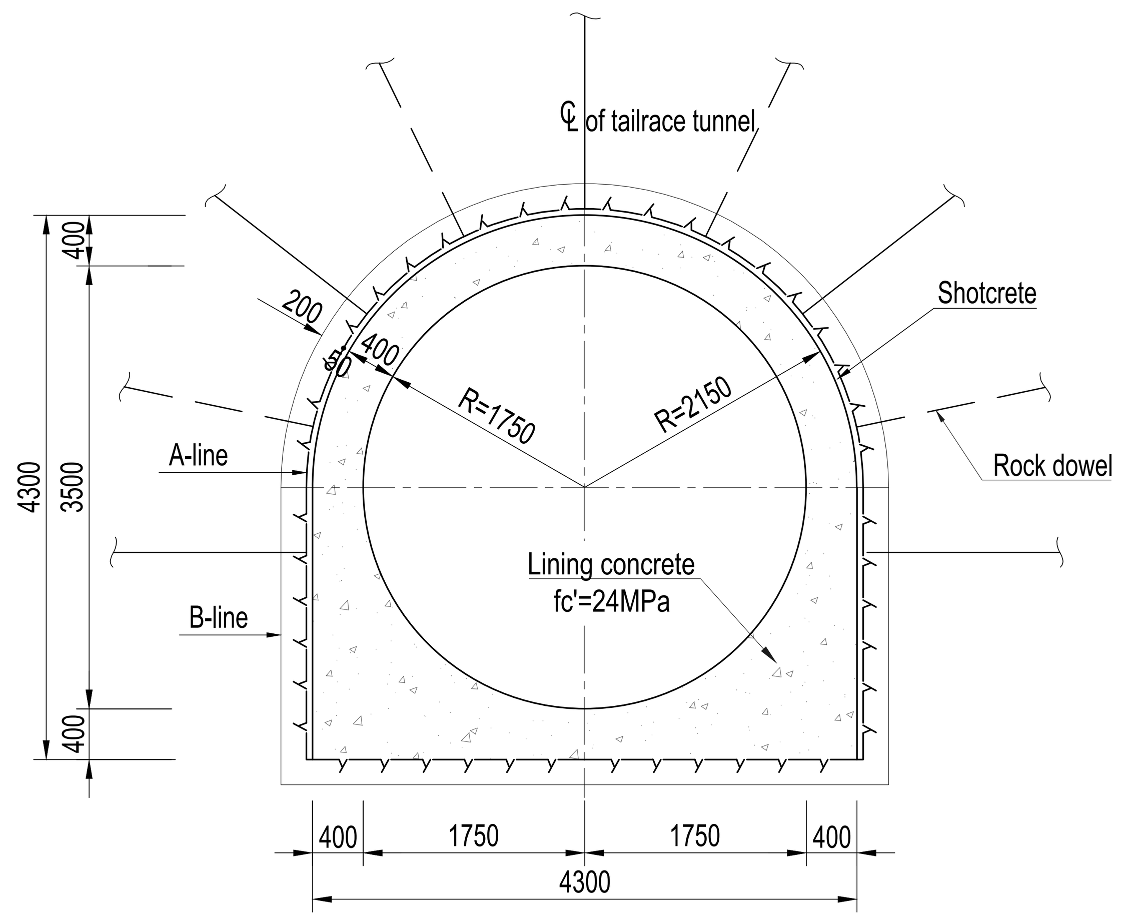
DRAWING TITLE

LAYOUT DRAWING OF TAILRACE SYSTEM(1/4)

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-070-CVL-DG-59001-01	1 OF 4	0A

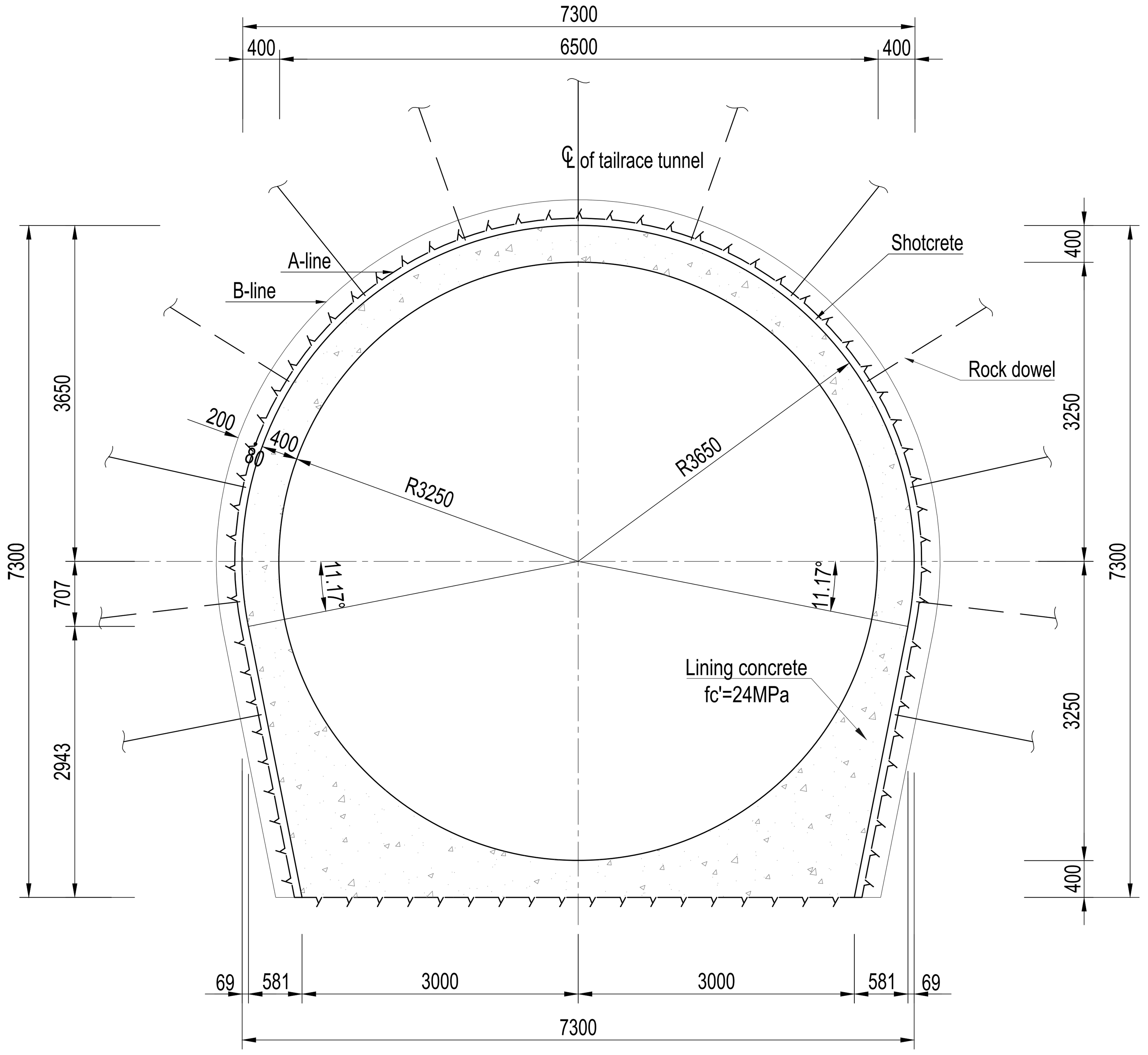
TYPICAL SECTION OF DRAFT TUBE TUNNEL

Scale 1:50



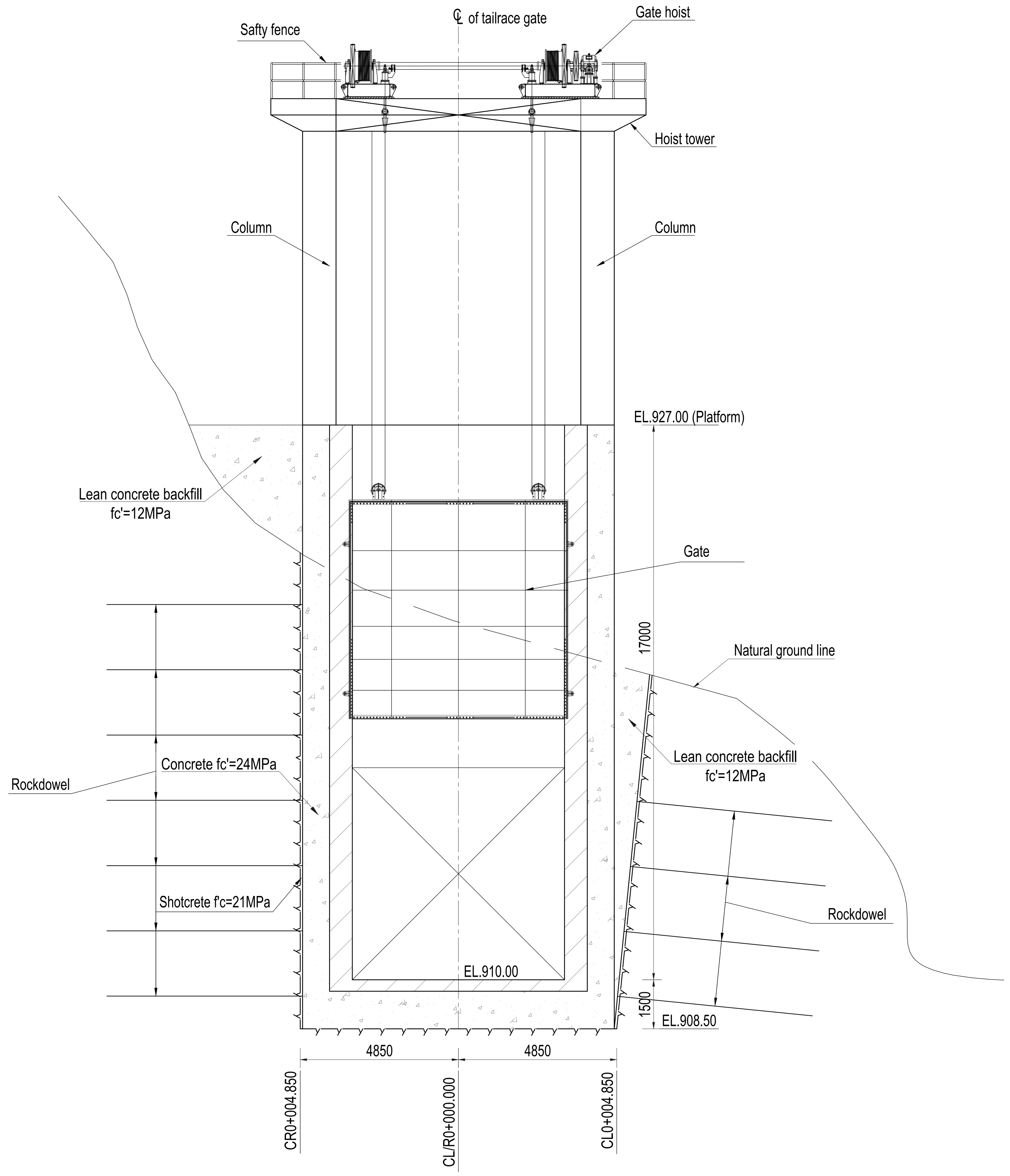
TYPICAL SECTION OF TAILRACE TUNNEL

Scale 1:50



SECTION A-A

scale 1:100



NOTE

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3. Other notes, refer to sheet 1.

Scale:

1:50 — 0, 0.5, 1, 1.5, 2, 2.5m

1:100 — 0, 1, 2, 3, 4, 5m

REFERENCE DRAWINGS

SYMBOL AND LEGEND

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Upper Trishuli-1 HEP (216MW)

OWNER

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OWNER'S ENGINEER

TRACTEBEL ENGIE — jade CONSULT

CONTRACTOR

DOOSAN Doosan Heavy Industries & Construction

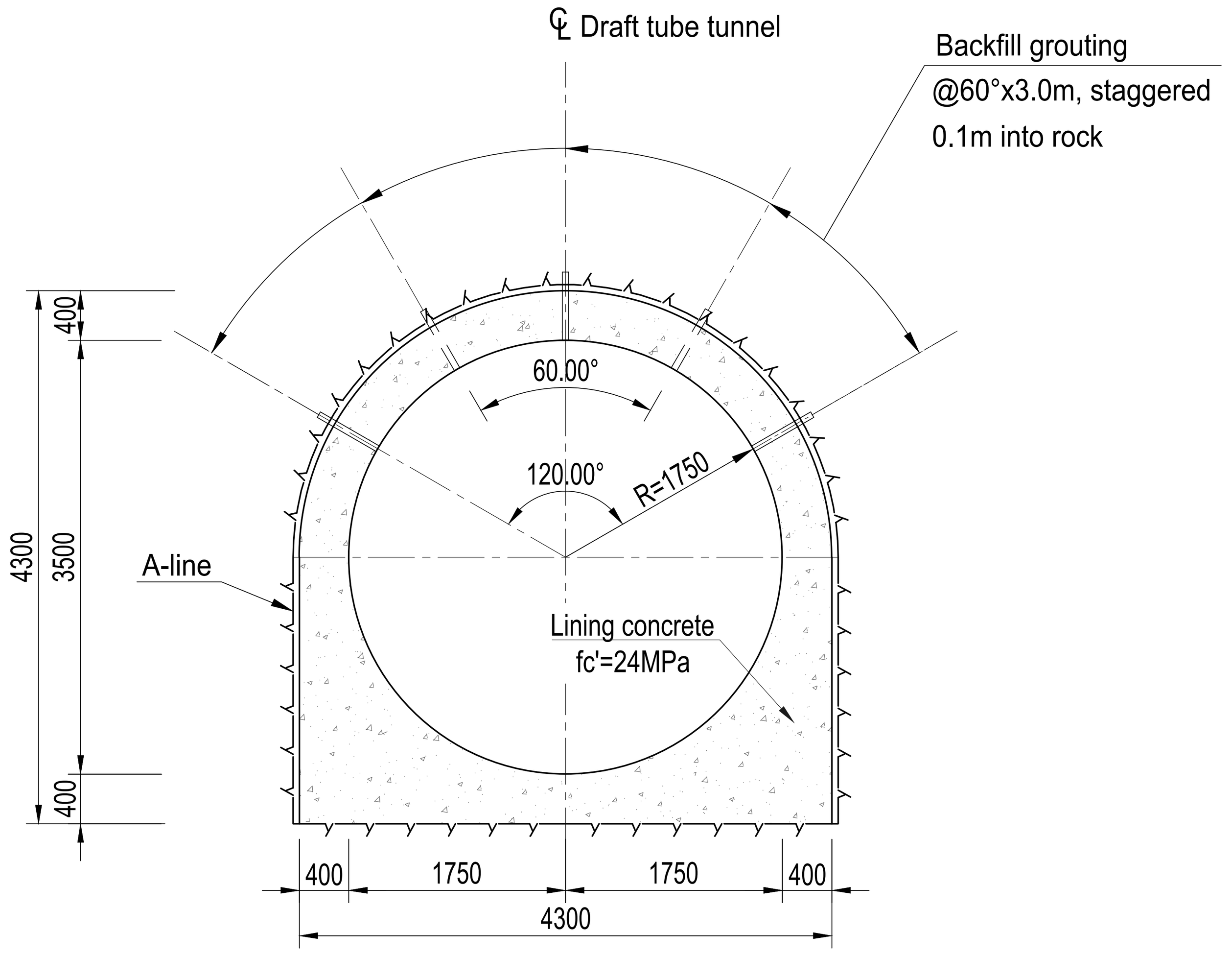
DRAWING TITLE

LAYOUT DRAWING OF TAILRACE SYSTEM(2/4)

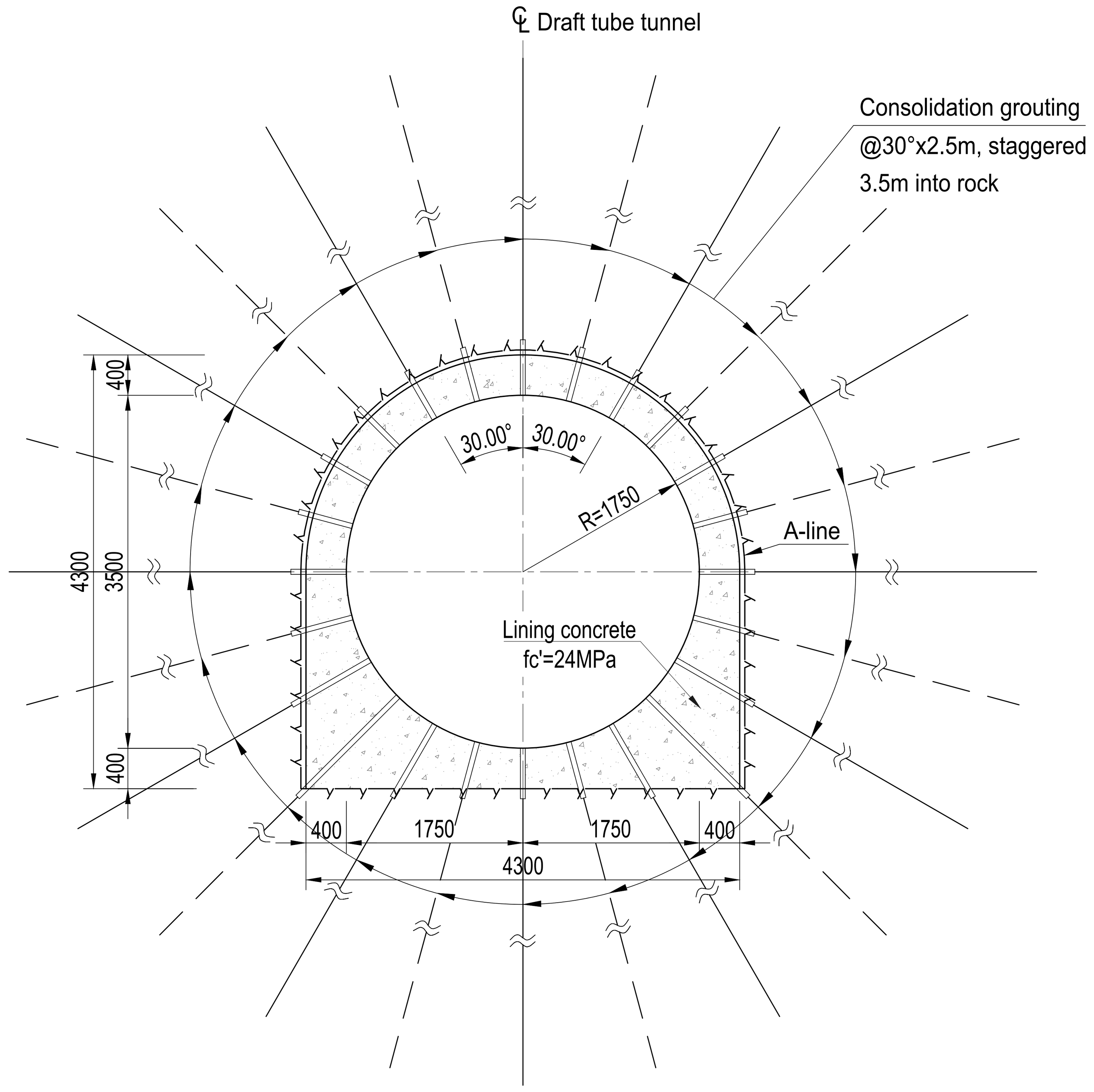
INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-070-CVL-DG-59001-02	2 OF 4	A

A1 (594 x 841 MM)

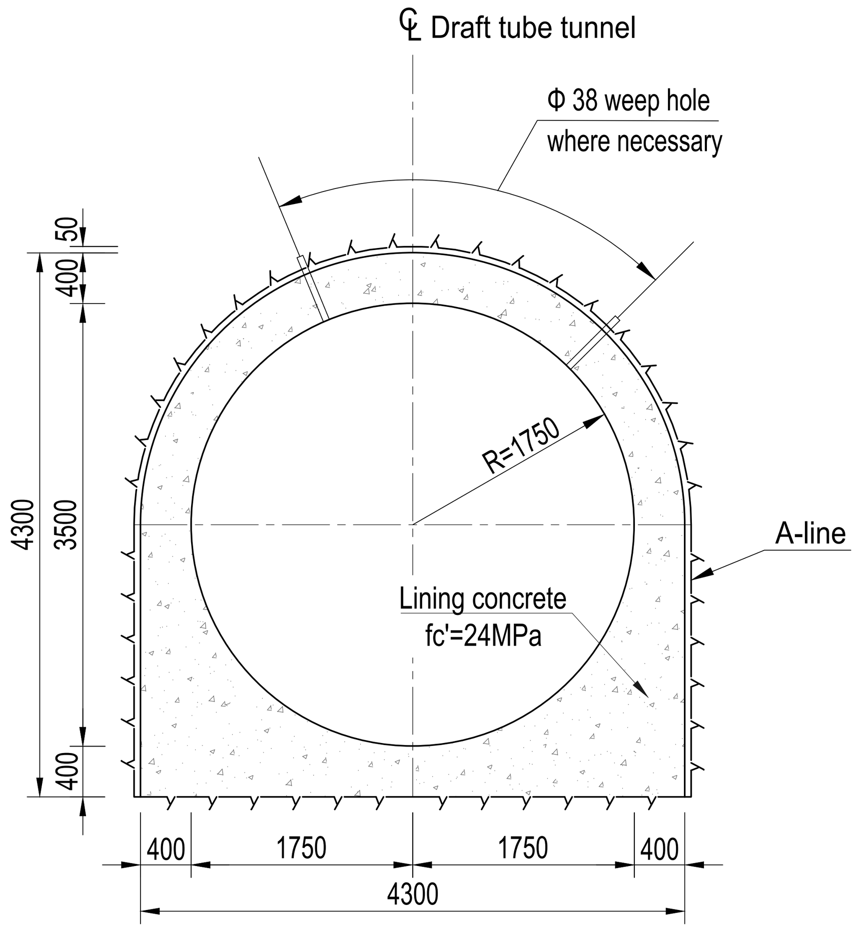
BACKFILL GROUTING FOR DRAFT TUBE TUNNEL
Scale 1:50



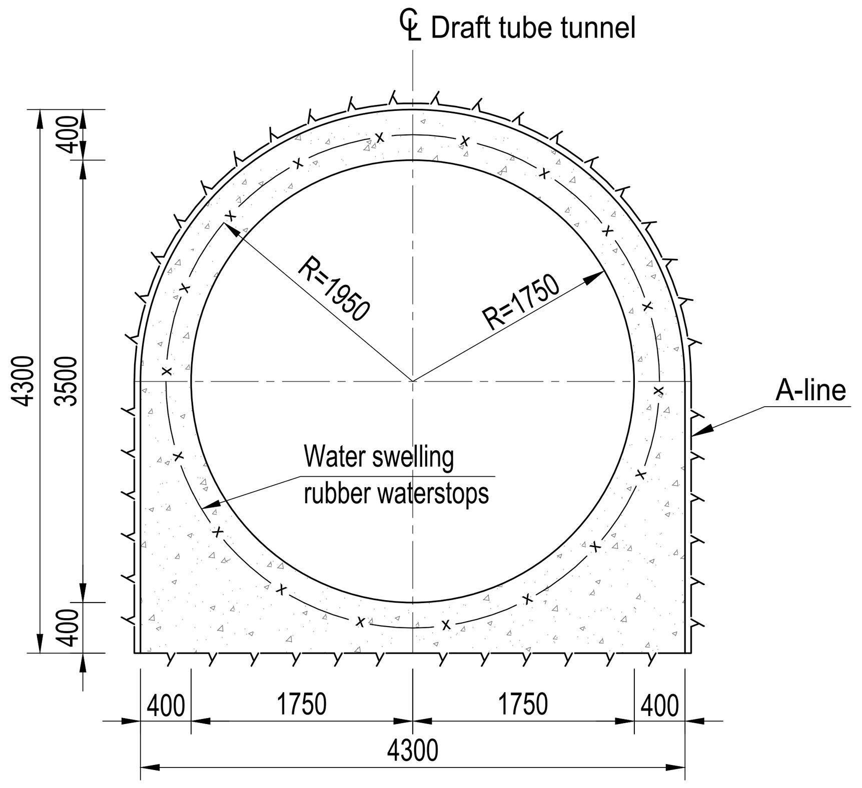
CONSOLIDATION GROUTING FOR DRAFT TUBE TUNNEL
Scale 1:50



WEEP HOLE LAYOUT FOR DRAFT TUBE TUNNEL
Scale 1:50



CONTRACTION JOINT DETAIL FOR DRAFT TUBE TUNNEL
Scale 1:50



NOTE

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3. Other notes, refer to sheet 1.

Scale: 1:50 0 0.5 1 1.5 2 2.5m

REFERENCE DRAWINGS

SYMBOL AND LEGEND

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PROJECT TITLE
Upper Trishuli-1 HEP (216MW)

OWNER
NWEDC NEPAL WATER AND ENERGY DEVELOPMENT CO. PVT.LTD.

OWNER'S ENGINEER
TRACTEBEL ENGIE / jade CONSULT

CONTRACTOR
DOOSAN Doosan Heavy Industries & Construction

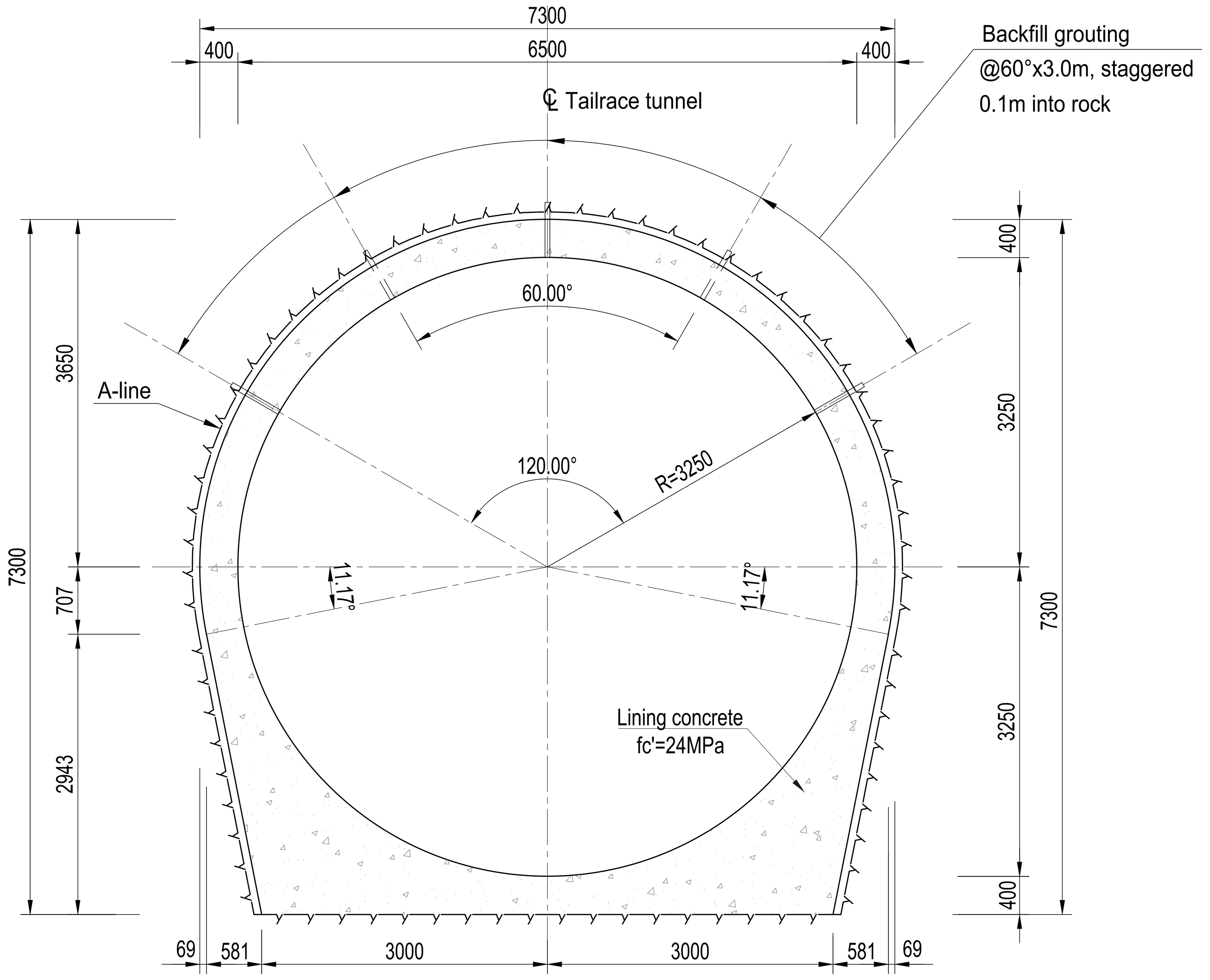
DRAWING TITLE
LAYOUT DRAWING OF TAILRACE SYSTEM(3/4)

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-070-CVL-DG-59001-03	3 OF 4	A

A1 (594 x 841 MM)

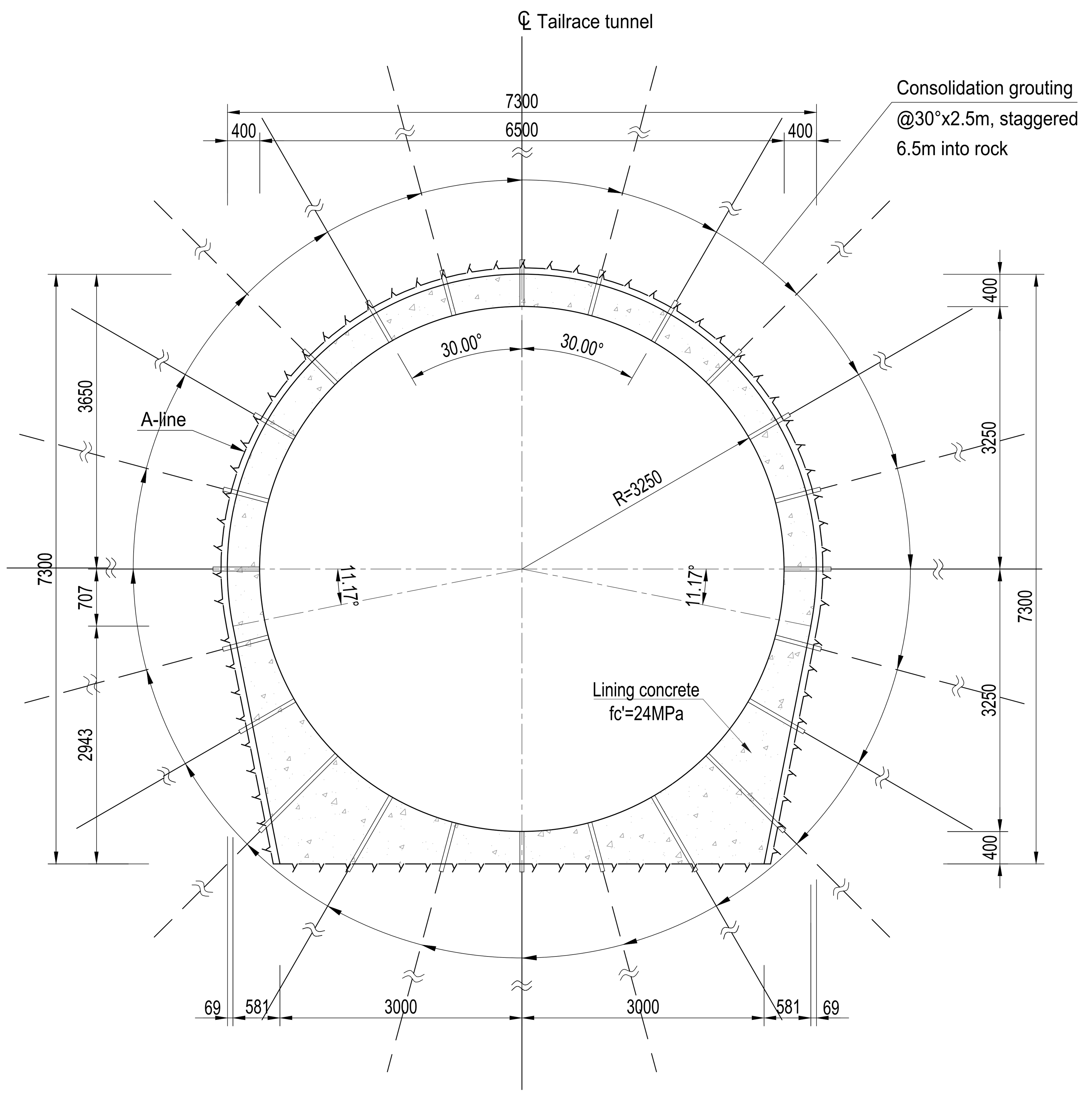
BACKFILL GROUTING FOR TAILRACE TUNNEL

Scale 1:50



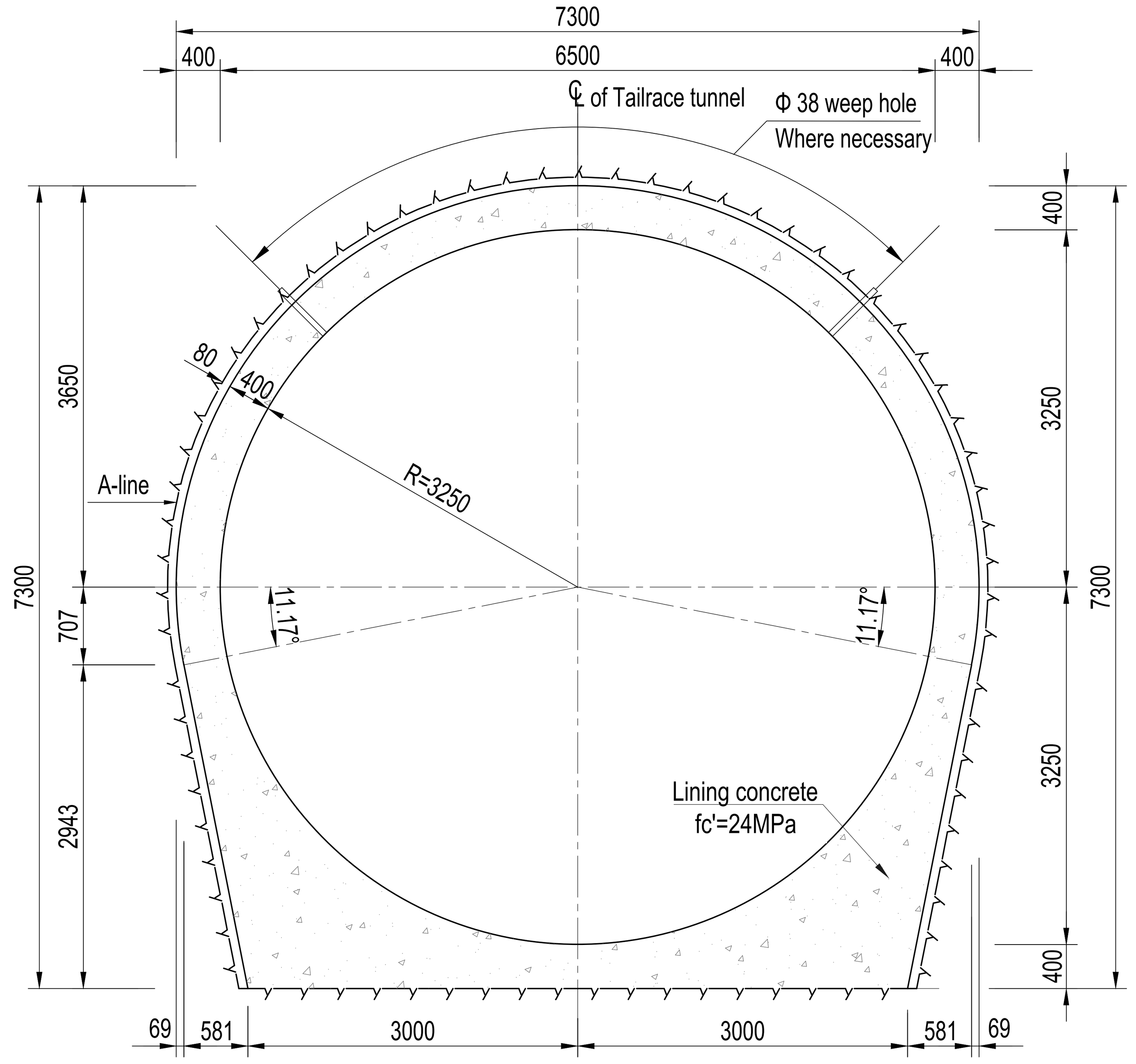
CONSOLIDATION AND BACKFILL GROUTING FOR SECTION B-B

Scale 1:50



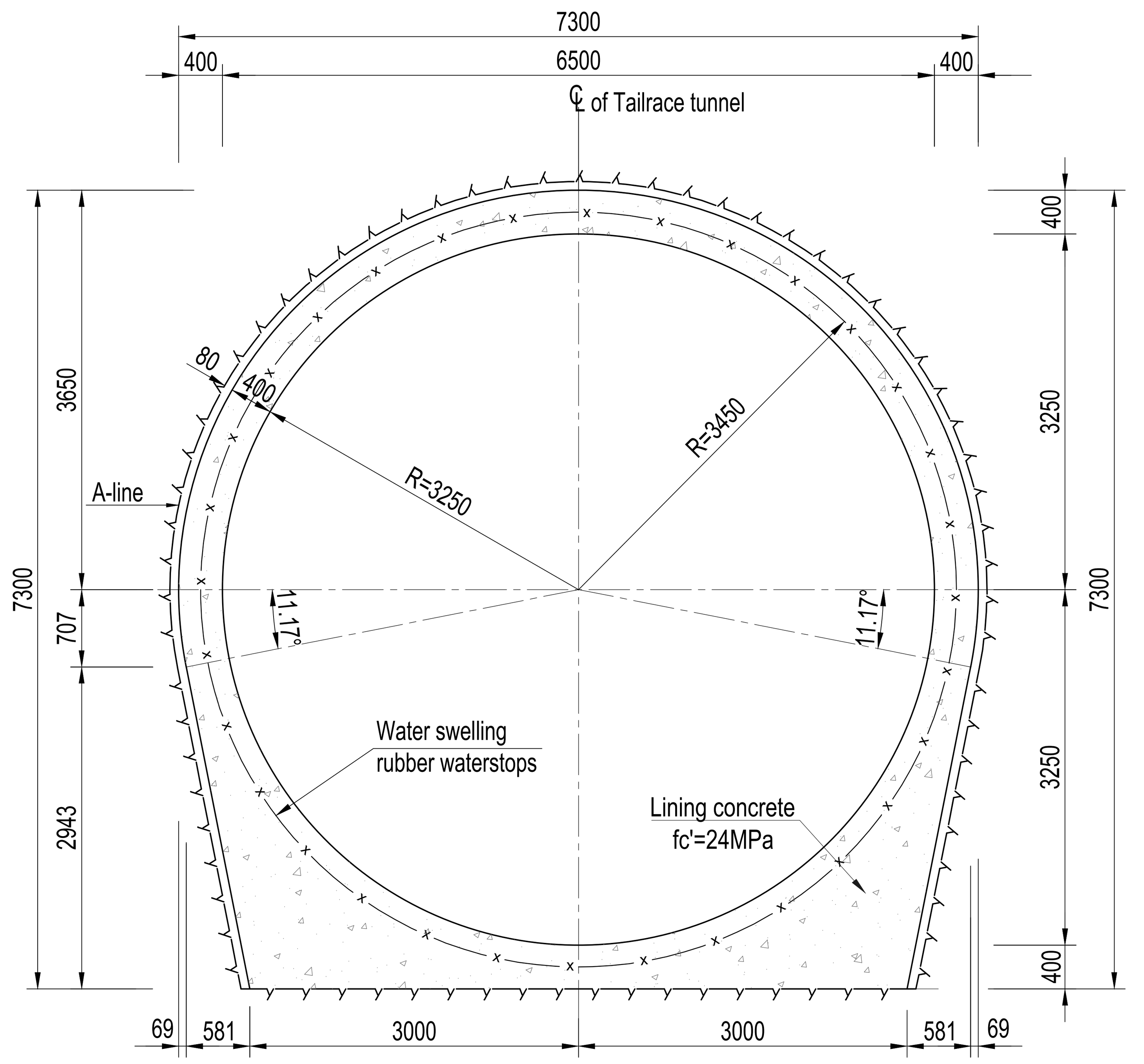
WEEP HOLE LAYOUT FOR TAILRACE TUNNEL

Scale 1:50



CONTRACTION JOINT DETAIL FOR TAILRACE TUNNEL

Scale 1:50



NOTE

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3. Other notes, refer to sheet 1.

Scale: 1:50 — 0 0.5 1 1.5 2 2.5m

REFERENCE DRAWINGS

SYMBOL AND LEGEND

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PROJECT TITLE

Upper Trishuli-1 HEP (216MW)

OWNER

NWEDC — NEPAL WATER AND ENERGY DEVELOPMENT CO. PVT.LTD.

OWNER'S ENGINEER

TRACTEBEL ENGIE — Jade CONSULT

CONTRACTOR

DOOSAN Doosan Heavy Industries & Construction

DRAWING TITLE

LAYOUT DRAWING OF TAILRACE SYSTEM(4/4)

INDEX	DRAWING NUMBER	SHEET NO.	REV. NO.
A	UT1-C-070-CVL-DG-59001-04	4 OF 4	A

A1 (594 x 841 MM)